

Application No.: 10/618,109
Amendment Dated: May 16, 2006
Reply to Office Action of: December 16, 2005

13488HF (GLT-106US)

Remarks/Arguments:

Claims 1-14 were pending in this application. With this response, claims 1, 3-5, and 11 have been amended, claim 2 has been cancelled, and claims 8-10 and 12-14 have been cancelled without prejudicing applicants' right to pursue these claims in a divisional application. The limitations of original claim 2 have been incorporated into claim 1, claims 3 and 5 have been amended to improve their clarity, and standard Markush terminology has been introduced into claim 4. The limitations of original claims 1 and 2 have been incorporated into claim 11, which has been rewritten as a method claim which positively recites a method step. No new matter has been introduced by these amendments. Claims 1, 3-7, and 11 are now the pending claims in this application.

Claims 1 and 11 were rejected as anticipated under 35 U.S.C. §102(e) by U. S. Pat. Appl. Publ. No. 2003/0019598 A1 (Nakagawa *et al.*). Claim 1 has been amended to recite the limitation of original claim 2 of a "polyolefin grafted with functional maleic anhydride groups." Claim 11 has been amended to also include this limitation. Original claim 2 was not rejected under Section 102 and, consequently, this rejection has been overcome.

Original claim 2, as well as claims 3-7 were rejected under 35 U.S.C. §103 as obvious based on U. S. Pat. Appl. Publ. No. 2003/0019598 A1 (Nakagawa *et al.*) in view of U. S. Pat. Appl. Publ. No. 2003/00207639 A1 (Lin). Applicants traverse this rejection in view of the amendments to claim 1 incorporating original claim 2. As amended, claims 3-7 and 11 all depend on independent claim 1, which recites:

1. A filter material comprising:
at least one nonheatsealable ply; and
at least one, heatsealable ply comprising fibers of synthetic material
and an adhesion promoter, wherein said adhesion promoter is a
polyolefin grafted with functional maleic anhydride groups.

Nakagawa *et al.* (U.S. 2003/0019598A1) discloses a heat-seal paper comprising a laminated body integrating a heat-seal layer (A) principally comprised of a synthetic fiber

Application No.: 10/618,109
Amendment Dated: May 16, 2006
Reply to Office Action of: December 16, 2005

13488HF (GLT-106US)

having a branched configuration and a substrate layer (B) principally comprised of a natural fiber, wherein the synthetic fiber is preferably a polyolefin synthetic pulp constructed of a resin composition comprised of an ethylene- α , β -unsaturated carboxylic acid copolymer containing 1 to 20% by weight of an α , β -unsaturated carboxylic acid and optionally a polyethylene resin. Thus, Nakagawa, *et al.* teach the use of a polyolefin synthetic pulp in a heat-seal layer wherein the α , β -unsaturated carboxylic acid is part of the backbone of the resin composition.

As is recognized in the Office Action by the lack of a rejection under Section 102 of original claim 2, Nakagawa, *et al.* fails to disclose or suggest adhesion promoter which is a polyolefin grafted with functional maleic anhydride groups. To satisfy this limitation, the office action has submitted an adhesion promoter including the claimed polyolefin grafted with maleic anhydride groups.

As set forth in MPEP § 2143, to establish *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation to combine the references. Second, there must be a reasonable expectation of success. Finally, the prior art reference must teach or suggest all of the claim limitations. For at least the reason noted herein, the Applicants contend that a *prima facie* case of obviousness has not been established; in particular, there is no suggestion or motivation to combine the references.

In making a rejection under Section 103, the examiner is obligated to read each reference as a whole. MPEP § 2141.02. Referring to the Lin reference, the citation used is at paragraph [0025] which is a description of "adhesion promoters." When reviewing this reference as a whole, it is clear that the adhesion promoters are a part of or a sub-component of "tackifiers." See abstract, line 5 and paragraph [0013]. More generally, Lin is directed to improving the adhesion between a binder and an absorbent material. The tackifier of Lin includes various rosins, for example, as well as the adhesion promoters. See paragraphs [0024] and [0025].

While the tackifier is important in the environment of Lin, it would be clearly disadvantageous in a filter material to which the claimed invention and Nakagawa *et al.* are both directed because the presence of a tackifier will result in a "pasting up" of the

Application No.: 10/618,109
Amendment Dated: May 16, 2006
Reply to Office Action of: December 16, 2005

13488HF (GLT-106US)

rollers used for forming sealing seams. As an example, seams can be formed on teabags and such seams do not easily paste up when a tackifier is not used but instead a heat-sealable polyolefin is used. Moreover, Lin does not provide any hint to a person of ordinary skill in the art that by using a polyolefin grafted with functional maleic anhydride groups, heat sealability and seal seam strength of a heat sealable fiber material can be greatly improved.

In short, for the reasons expressed above, if upon combining the teaching used by the Office Action of Lin with Nakagawa *et al.*, Nakagawa *et al.* would be rendered unsatisfactory for its intended purpose. In short, upon attempting to make the products of Nakagawa *et al.* (for example, Lin's tackifier which is inextricably tied to the adhesion promoter) would cause the rollers used for forming the sealing seams to become inoperable. Therefore, while the Office Action has posited motivation to combine the references to be the "desire to provide a heat-sealing layer with improved adhesion," the Applicants have rebutted this alleged motivation for the reasons described herein. See MPEP § 2144.08.

It is respectfully submitted that the pending claims are in condition for immediate allowance and a notice to this effect is earnestly solicited. The Examiner is invited to phone applicant's attorney if it is believed that a telephonic or personal interview would expedite prosecution of the application.

Respectfully submitted,



Christopher R. Lewis, Reg. No. 36,201
Attorneys for Applicant

Dated: May 16, 2006

P.O. Box 980
Valley Forge, PA 19482-0980
(610) 407-0700

Application No.: 10/618,109
Amendment Dated: May 16, 2006
Reply to Office Action of: December 16, 2005

13488HF (GLT-106US)



The Commissioner for Patents is hereby authorized to charge payment to Deposit Account No. **18-0350** of any fees associated with this communication.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on: May 16, 2006

Mary H. Stephenson

Mary H. Stephenson

I:\GLT\106US\amend01.doc